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# The Relationship Between Promoting Self-Efficacy and Informed Decision-Making in Pregnant Nulliparous Women and Method of Delivery

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*Keywords: Self-efficacy; Informed decision-making; Nulliparous women; First Pregnancy; Health Belief Model; Elective Cesarean Section; Fear of childbirth; Public health concern; Low-risk Women; Post Traumatic Stress Disorder*

Abstract

This presentation will cover the relationship between the concepts of decreased self-efficacy in pregnant women's abilities to deliver their babies vaginally, fear of the pain and duration of labor process, and the acceptance of medical intervention without sufficient intrapartum education surrounding delivery methods. These interrelated variables impede the concept of informed choice. The current state of the problem surrounds women with low self-efficacy who are predicted to have negative childbirth experiences such as, consenting to an astronomically high rate of cesarean sections. The focus for nursing is that low-risk, healthy women who elect cesarean sections without the knowledge that permanent disability or death can result for either the mother or fetus, inversely increases morbidity and mortality associated with childbirth. This is significant because the rise in cesarean sections correlates with low self-efficacy has become an international public health concern (Gourounti, 2015; Khorsandi, 2012). In 1985, the World Health Organization composed a position statement that internationally, the cesarean delivery rate should be between ten to fifteen percent of all births, when justified to prevent fetal or maternal mortality, or both (WHO, 2015). Since then, the cesarean rate has continued to rise from a third to a half of all deliveries in developed countries (Caughey, 2016; Gourounti, 2015). Further critiqued research will be shared during the presentation including how Posttraumatic Stress Disorder (PTSD) can develop from Fear of Childbirth (FOC) and several nursing interventions to increase self-efficacy using the Health Belief Model and the education of women to make informed decisions in childbirth. The presentation will cover the nursing problem summary and corresponding scientific literature.

Acknowledgement Page

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## Introduction

From the point in which conception occurs, planned or unplanned, childbirth is a natural phenomenon, in which women have to endure. Once the pregnancy test reads positive, and the flicker of the heartbeat is seen on the ultrasound monitor, first-time mothers begin having thoughts surrounding how one's body may change to adapt to pregnancy, and the horror stories they have heard of negative experiences of labor and delivery expressed from friends and family members. Many women that are pregnant for first time, also known as nulliparous women, may seek out resources found on the internet as their primary source of information, which are not always reliable. Therefore, nulliparous women may create reverence toward childbirth based on the experiences of others, lack of prenatal knowledge, and unreliable sources of information, thus resulting in an intense fear in women when it comes to childbirth.

Fear of childbirth is measured as self-efficacy, the belief in one's own ability to perform in a situation (Salomonsson, 2013). Self-efficacy can be affected by motivation or willingness to participate in a task, vulnerability in new situations, it has the power to create emotional distress, and influence one's behavior (Carlsson, 2015). Because childbirth is an inevitable event of pregnancy with an unknown outcome, a culture of fear, anxiety, and stress is created (Salomonsson, 2013). For a woman expecting her first child, a history of depression, stress or anxiety can also negatively affect her self-efficacy, and even has the potential to lead to post-traumatic stress disorder (PTSD) symptoms following childbirth (Gökçe, 2016).

## Problem Statement

Childbirth is natural physiologic process of events that women have been experiencing since the beginning of time. Historically, labor and delivery were non-medical social events,

performed in a squatting position to facilitate delivery by gravitational force, tended to by a midwife (Khorsandi, 2012). Over the last few centuries, the rise in supine or horizontal birthing positions, and medical intervention have become the criterion for Obstetrician delivery methods (Desseauve, 2017; Nieuwenhuijze, 2013).

As a result, the complex multifactorial concept of self-efficacy is low if women have a diminished belief in their own abilities to deliver their babies vaginally, a fear of the pain and duration of labor process, the acceptance of medical intervention inhibiting their ability to deliver in a position to promote gravitational force, and insufficient prenatal education surrounding delivery methods. Women with low self-efficacy are predicted to have negative childbirth experiences associated with receiving epidural analgesia, instrumental deliveries, consenting to an astronomically high rate of cesarean sections, and PTSD (Carlsson, 2015; Gökçe, 2016).

The rise in cesarean sections correlated with low self-efficacy has become an international public health concern (Gourounti, 2015; Khorsandi, 2012). In 1985, the World Health Organization composed a position statement that internationally, the cesarean delivery rate should be between ten to fifteen percent of all births, when justified to prevent fetal or maternal mortality, or both (WHO, 2015). Furthermore, the most current position statement published in 2015 continues to support that cesarean sections are acceptable between ten to fifteen percent of all births to save fetal and maternal lives, and not justified otherwise (WHO, 2015). As cesarean rates have continued to increase above thirty percent of all live births, there has been no effect to the current mortality rates (WHO, 2015). Instead, women are electing cesarean sections without the knowledge that permanent disability or death can result for either the mother or fetus. There is evidence of increased maternal morbidity, hemorrhage, increased

risks in subsequent pregnancies, unfavorable fetal outcomes, (WHO, 2015; Lowdermilk, 2012) and increased admission to NICU; specifically for transient tachypnea or respiratory distress (ACOG, 2013). Although, the risk for an initial cesarean section for nulliparous women is associated with longer hospital stays and hemorrhage, the risks for subsequent pregnancies are extremely alarming (Caughey, 2016; Lowdermilk, 2012). The complications in subsequent pregnancies include: uterine rupture, placental implantation problems (such as placenta previa or placenta accreta), bladder and bowel injuries, venous thromboembolism, a need for hysterectomy, and even an increased risk for postpartum cardiac arrest (ACOG, 2013; Lowdermilk, 2012). Therefore, the American College of Obstetricians and Gynecologists (ACOG) released in their position paper that a cesarean delivery by maternal request (CDMR) is not recommended for women who desire to have more children (ACOG, 2013).

In the United States, 1.3 million women, 32.2% of all deliveries, delivered by cesarean section in 2014, and in Greece, the Cesarean rate is at an astronomical 50% of all deliveries (Caughey, 2016; Gourounti, 2015). As the cesarean rate continues to rise in developed countries, specifically, the mortality rates are positively correlated with cesarean sections; so deaths are ultimately increasing, rather than declining. Cesareans originally were indicated for when complications arise, and have the advantage of saving lives; whereas pregnancies without complications undergoing cesarean section give rise to various complications from shortening gestational period, in turn affecting neonatal lung health, increase the incidence of infection, and may negatively affect breastfeeding (Xie, 2015).

A research study containing the cesarean rate among thirty-one industrialized countries concluded that the median cesarean rate was 25.3%, ranging from 15.6% in the Netherlands to

50.0% in Greece (Xie, 2015). The World Health Organization has already stated that the benchmark for cesareans should be from ten to fifteen percent, however of the top industrialized countries in the world, not one falls within the recommended parameters (WHO, 2015). These statistics are unacceptable and dangerous. Throughout the labor process, fetal heart monitors are strong predictors of fetal health, and are categorized into categories 1, 2, and 3 (Lowdermilk, 2012; Caughey, 2016). Category 1 expresses fetal well-being with healthy accelerations and early decelerations for head compression coming down the birth canal (Lowdermilk, 2012). Whereas Category 3 tracings are indicative of fetal distress and generally are the ones requiring immediate delivery by cesarean due to acidosis or cord compression (Caughey, 2016). However, Category 2 tracings are everything in between; and Obstetricians are increasing the amount of cesareans delivered in this group (Caughey, 2016). As nurses, this is the area that requires advocacy and intervention; several intrauterine resuscitative methods can be implemented, first, instead of heading to the operating room. Such interventions include: turning the patient to her left side; placing a non-rebreather oxygen mask at 8-10 liters per minute; and hydrating the patient with a bolus of Lactated Ringers (Lowdermilk, 2012).

Consequently, women are unaware that such intrauterine resuscitative methods exist, or low-risk healthy women are offered to have a CDMR by the obstetrician during the antepartum period. These barriers are just two examples of how women fail to learn the evidence behind birthing methods. Ironically, Obstetricians favorably promote interventions or birthing positions with increased convenience to the medical care team (Desseauve, 2017), which places dependence on medical intervention rather in women's innate abilities to deliver their babies vaginally (Khorsandi, 2012).

## Purpose Statement

Hence, this study of the literature will focus on how women can break away from the barriers contributing to a low self-efficacy, and pressures women feel from their doctors and families to surrender control in the birthing setting, resulting in unfavorable birthing positions or cesarean sections. Furthermore, this researcher will explore how a climate of change may be implemented to increase coping mechanisms and sense of control during labor. By executing an educational program in the antepartum period by informing women of all available choices, outcomes, and consequences during labor and delivery, will in turn, decrease the rate of cesareans and stress, thus improving both fetal and maternal outcomes when it comes to method of delivery.

## Literature Review

This paper concentrates on how the self-efficacy of nulliparous women can be a strong indicator of birthing outcomes and how accepted medical interventions are correlated with informed choices during delivery. The databases this researcher used included Iceberg, CINAHL, and ScienceDirect. Keywords searched in these three databases included: Self-efficacy; Informed decision-making; Nulliparous women; First Pregnancy; Health Belief Model; Elective Cesarean Section; Fear of childbirth; Public health concern; Low-risk Women; Post Traumatic Stress Disorder. The themes that emerged from this literature will be covered in more detail in eleven articles as three subheadings in this Literature Review: Fear of Childbirth, the Rise in Cesarean Delivery, and Health Beliefs.

## Fear of Childbirth

**Anxiety during pregnancy.** To further explore how fear of childbirth can result in adverse health outcomes, this researcher will discuss *The Effects of Childbirth Self-Efficacy and Anxiety During Pregnancy on Prehospitalization Labor* written by Kathleen Beebe. This literature was published in 2007 in the Journal of Obstetric, Gynecologic and Neonatal Nursing (JOGNN). The purpose of this study was to identify relationships among several variables which contribute to anxiety, pain during labor, and how the pain was managed prior to hospitalization.

During the Antepartum period, Beebee assesses several variables using four different instruments such as the Spielberger Trait Anxiety Inventory (STAI-T), the Childbirth Self-Efficacy Inventory (CBSEI), and the Prenatal Self-Evaluation Questionnaire (PSEQII). The Short Form McGill Pain Questionnaire (SF-MPQ) was the instrument used during the Intrapartum period (Beebe, 2007). The variables include: "(a) to describe levels of trait anxiety, childbirth-specific anxiety, and self-efficacy for childbirth in nulliparous women during the late third trimester of pregnancy, (b) to describe levels of pain in nulliparous women in early labor prior to hospitalization, (c) to describe labor management strategies used by nulliparous women prior to hospitalization, and (d) to examine relationships among the aforementioned perinatal biopsychosocial factors, number of hours of labor at home prior to hospital admission, and admitting cervical dilation" (Beebe, 2007, Pg. 411).

To accomplish this study, a convenience sample of 35 women ages 18-40 participated in this study (Beebe, 2007). The inclusion criterion were equal or greater than 38 weeks gestation, low-risk first pregnancy, planned vaginal delivery, enrolled in childbirth education courses, and

currently with the father of baby (Beebe, 2007). The setting included a small urban region north of the San Francisco Bay Area (Beebe, 2007). The Methodology includes a quantitative design as a longitudinal, prospective descriptive study, and data was collected from the participants' homes and in the birthing facilities (Beebe, 2007). Instruments were measured using self-reporting questionnaires, postpartum interviews, and a review of medical records (Beebe, 2007).

The results from the research adopted in this study were that an inverse relationship existed from cognitive coping strategies and pain score (Beebe, 2007). An inverse relationship between cognitive coping strategies and childbirth-specific anxiety was also evident (Beebe, 2007). In addition, self-efficacy for childbirth was related to a number of management strategies (Beebe, 2007). An unexpected finding was a significant correlationship between the STAI-T anxiety inventory and admitting dilation, concluding that the greater the anxiety scores, the greater the admitting cervical dilation (Beebe, 2007). This researcher discovered four key findings as a result from the research. (1) As anxiety of a woman in labor increases, the confidence in her own innate abilities to perform relaxation techniques decreases, thus contributing to higher levels of pain during labor and birth (Beebe, 2007). (2) Trait anxiety, a stable measure of anxiety, can be an early indicator to predict pregnancy-related anxiety, thus providing anticipatory interventions and continuum of care by promoting relaxation techniques early in pregnancy (Beebe, 2007). (3) As anxiety increases, self-efficacy for childbirth decreases (Beebe, 2007). (4) Cognitive coping mechanism strategies used during prehospitalization labor resulted in decreased pain; the use of behavioral coping mechanism strategies resulted in staying at home longer during early labor (Beebe, 2007).

Limitations of the study were the inability to replicate an association between the use of medications to control pain in labor and self-efficacy scores. Another limitation of the study was that the SF-MPQ was assessed two to three weeks postpartum, thus pain scores may not completely replicate the experience. Pain scores could have also been altered by a series of variables such as: environment, how fast labor is progressing, and involvement of support persons. This study also included a small sample in a specific setting, so the relation of the variables used in this study may infer more detailed results in a larger sample.

The implications for nursing practice, as illustrated in the study determined that anxiety extremes, such as too high or too low, were related to poor pregnancy outcomes. Further research would explore what an optimum amount of anxiety in prehospitalization labor is and how a woman preparing for childbirth can achieve it. Currently, nurses and other health professionals as well as antepartum education recommend that women stay home as long possible from the time labor begins. This recommendation is made to avoid unnecessary interventions and prolonged hospitalizations from such interventions. Women seeking admission on labor units with less cervical dilation, unfortunately, are associated with early placements of epidural analgesia, which further prolongs the intrapartum period in nulliparous women (Beebe, 2007). Therefore, to best manage early labor and improve obstetric outcomes, it is recommended for women to be promoted to have an early labor assessment and individualized management based on the initial assessment. This individualized care plan can be implemented to meet the individual needs of all women in the intrapartum period, despite varying levels of childbirth self-efficacy.

**Maternal Well-being.** To further explore how fear of childbirth can result in adverse health outcomes, this researcher will discuss *The Relationship Between Childbirth Self-Efficacy and Aspects of Well-being, Birth Interventions and Birth Outcomes* written by Ing-Marie Carlsson. This literature was published in 2015 in the Midwifery Journal. The purpose of this study was to study how self-efficacy correlates to well-being in the third trimester, and to explore if self-efficacy is associated with obstetric factors.

To accomplish this study, a sample of 406 women between 35-42 weeks of gestation were recruited by their midwife during routine prenatal care (Carlsson, 2015). The inclusion criterion were only nulliparous women were invited to participate, in addition, to singleton low-risk pregnancies (Carlsson, 2015). The women needed to read and write Swedish to accurately fill out the various questionnaires (Carlsson, 2015). The questionnaires were filled out during routine prenatal appointments. The setting of this study took place at several antenatal clinics in Halland, Sweden from 2011-2012 (Carlsson, 2015). The Methodology includes a quantitative design by performing a cross-sectional survey. The researchers gathered the data using five different instruments: the first instrument is the Childbirth Self-efficacy Inventory (CBSEI) with the variables of outcome expectancy and efficacy expectancy. The second instrument used in this study was the Wijma Delivery expectancy Questionnaire (W-DEQ) to measure fear of childbirth. The third instrument is the Sense of Coherence Questionnaire (SOC-13), this instrument measures level of intelligibility in stressful situations. The fourth instrument used in this study is the Maternity Social Support Scale (MSSS), which measures a level of social support, perceived by the woman. The final instrument used in this

study is the Profile of Mood States (POMS), which assess dimensions of negative mood states, such as anger, hostility, fatigue, and depression.

The researchers correlated results among the five different instruments used in this study, and discovered that women with a lower self-efficacy for childbirth overall had an increased fear of childbirth. Whereas the women who reported higher self-efficacy, scored a higher level of well-being and increased coherence (Carlsson, 2015). The weakest correlation in this study was the perceived level of social support during the antepartum period. Another interesting finding surrounding obstetric outcomes, was that women that reported higher self-efficacy used fewer epidurals for pain relief, than women with lower self-efficacy (Carlsson, 2015). Therefore, women with higher self-efficacy ratings also had higher ratings on the POMS questionnaire, resulting in increased positive mentality.

The key findings of this study were that the result supported the hypothesis that women with higher self-efficacy also had increased levels of positivity and well-being. Lower self-efficacy was positively correlated with fear of childbirth and women with a history of mental illness. This study did not find any significance in birthing outcomes, however women reporting lower self-efficacy had an increased likelihood of using epidural analgesia for an intervention during the intrapartum period. The researchers also discovered that the promotion of self-efficacy in pregnancy may reduce anxiety of the impending delivery.

This study was not without limitations. Due to the cross-sectional design method, some correlations between results cannot be fully explained and analyzed. In addition, the sample of women in this study are from one region in Sweden, to address this concern fully across all socio demographics, a larger sample would need to be drawn.

Therefore, the implications for nursing practice is to address both self-efficacy and anxiety by exposing nulliparous women to hear stories of positive birthing experiences from normal women, and hearing success stories from role-models (such as one's sister who had a positive birth outcome). Self-efficacy can also be managed by teaching women coping mechanisms to decrease the physiologic and emotional stress responses that are activated throughout pregnancy and ultimately at the time of delivery. However, it is essential to properly screen levels of self-efficacy during routine prenatal appointments, as both mental illness and low self-efficacy can be an indicator for fear of childbirth, thus resulting in a request for cesarean section.

**Post-traumatic stress disorder.** To further explore how fear of childbirth can result in adverse health outcomes, this researcher will discuss *The Effects of Antenatal Education on Fear of Childbirth, Maternal Self-Efficacy and Post-traumatic Stress Disorder (PTSD) Symptoms Following Childbirth: An Experimental Study* written by Gozde Gökçe. This literature was published in 2016 in the Journal of Applied Nursing Research. The purpose of this study was to examine how antenatal education can affect maternal self-efficacy, fear of childbirth and a postpartum outcome of post-traumatic stress disorder (Gökçe, 2016).

Gökçe assesses several variables using four instruments such as two versions of the Wijma Delivery Expectancy/ Experience Questionnaire (W-DEQ-A, W-DEQ-B), the Childbirth Self-Efficacy Inventory (CBSEI), and the Impact of Event Scale--Revised to assess PTSD symptoms following delivery (Gökçe, 2016). The W-DEQ-A was assessed during the antepartum period to assess fear of childbirth and feelings surrounding childbirth (Gökçe, 2016). The CBSEI was also assessed during the antepartum period to determine outcome expectancy,

"the belief that a given behavior will lead to a given outcome" (Gökçe, 2016, Pg. 230) and efficacy expectancy, "a personal conviction about one's ability to successfully perform required behaviors in a given situation" (Gökçe, 2016, Pg. 230). During the postpartum period, the W-DEQ-B was assessed to determine fear during childbirth and feelings as a result from delivery (Gökçe, 2016). The IES-R measured PTSD symptoms such as "intrusive thoughts, avoidance behaviors, and hyperarousal" (Gökçe, 2016, Pg. 230).

In the interventional group, a four-week antenatal class outline covered objectives such as "raising awareness of fear of childbirth, strategies to cope with fear of birth, psychological and physiological adaptations to birth, having a sense of control over birth, positive appraisal of birth, and the preservation of positive birth memories" (Gökçe, 2016, Pg. 230). This content offered animated videos, emotional support groups, powerpoint presentations, and role-playing exercises (Gökçe, 2016). The women were taught several relaxation techniques, prepared for a realistic birthing plan, and were provided education surrounding the stages of labor, hormonal changes, and medical interventions offered during labor (Gökçe, 2016). The antenatal education adopted several theories from "Dick-Read's "natural labor," Lamaze's "psychoprophylaxis", Balaskas's "active birth" and Mongan's "hypnobirthing" philosophy" (Gökçe, 2016, Pg. 229).

As an experimental study, the researcher used Minitab 15 to calculate outcomes using ten participants in each group (Gökçe, 2016). This data collection tool allowed the researcher to learn that each group required at least thirty-one women; thus 113 women were recruited from advertisements posted in the hospital (Gökçe, 2016). 50 women were assigned to each group (Gökçe, 2016). The inclusion criterion were low-risk nulliparous women between 20-32 weeks gestation, no pregnancy complications, and not currently attending any other antenatal programs

(Gökçe, 2016). The setting for this study took place in a city located in the Middle Anatolia Region of Turkey (Gökçe, 2016).

The Methodology included a quasi-experimental quantitative design by comparing a control group of women only attending routine prenatal care and an antenatal education intervention group (Gökçe, 2016). Data was collected between December 2013 and May 2015 by reviewing medical records and postpartum home visits (Gökçe, 2016). Instruments were measured using antepartum and postpartum self-reporting questionnaires (Gökçe, 2016).

The results from the research adopted in this study were that there were no significant differences between the control group and the intervention group prior to the study when it came to childbirth self-efficacy and fear of birth (Gökçe, 2016). However, after the study, the differences between the control group and the intervention group were significant when it came to childbirth self-efficacy and fear of birth (Gökçe, 2016). The interventional group, who received antepartum education, had significantly different scores in areas of self-efficacy, outcome expectancy, efficacy expectancy and fear of birth (Gökçe, 2016).

The key finding in this study was that following this experimental study regarding the fear of birth during the postpartum period and its correlation to developing post-traumatic stress disorder following pregnancy, the data inferred that the difference between the control group and the interventional group was significant. "The intervention group had significantly lower PTSD symptoms following childbirth than women in the control group" (Gökçe, 2016, Pg. 231). Therefore, the intervention group of this study had higher levels of childbirth self-efficacy, whereas the women with decreased self-efficacy had an increased fear of childbirth (Gökçe, 2016). As a result, the women with an increased fear of childbirth and decreased self-efficacy,

had an increased likelihood of developing PTSD during the postpartum period (Gökçe, 2016). Gökçe concluded that before the study began, women in both groups had no differences between fear of childbirth, and by promoting antenatal education during the antepartum period, fear of childbirth may have been reduced among the interventional group.

The limitations of this study include only collecting a sample of women from Central Anotolia, Turkey, and may not relate to the general population of nulliparous women (Gökçe, 2016). Also, due to the concern of dropout rates, women were informed about the antenatal education portion of the study, hereby they had the choice of participating in the experimental group (Gökçe, 2016). The women who did not agree to attending antepartum classes only attended their prenatal care and were considered the control group (Gökçe, 2016). The strengths of the study were that the women that consented to receiving antenatal education had a significantly lower level of fear of childbirth in both intrapartum and postpartum periods (Gökçe, 2016).

Studies performed prior to this experiment suggested that women who attend antepartum education had significantly higher self-efficacy in childbirth and feeling of empowerment during labor and delivery (Gökçe, 2016). Because of this, antenatal education has been designed to improve a pregnant woman's self-confidence to improve childbirth self-efficacy. Antenatal education offers a platform nulliparous women to share honest emotions about their impending delivery and promoted the vital need for reading, watching, and reporting positive birthing experiences (Gökçe, 2016). This study had significant relevance in nursing by promoting antenatal education to nulliparous women can reduce the likelihood of developing post-traumatic stress disorder during the postpartum period (Gökçe, 2016). Fear of childbirth can manifest

during the antepartum period, and be a strong indicator for developing PTSD due to the perceived threat of death or injury which may result from childbirth (Gökçe, 2016). In turn, by increasing self-efficacy, fear of childbirth reduces PTSD following childbirth (Gökçe, 2016).

Another positive outcome with the promotion of antenatal education, women were taught how to perform cognitive and behavioral coping mechanisms during the intrapartum period (Gökçe, 2016). This training also allowed women to learn how to cognitively restructure birth memories to remember a positive intrapartum experience (Gökçe, 2016). This allowed women to cope in the postpartum period, halting the potential for PTSD to develop (Gökçe, 2016). Antepartum education is the foundation for a positive intrapartum and postpartum experience by reducing fear of childbirth and increasing maternal self-efficacy. Therefore, "routine implementation of antenatal education should be seriously considered as a component of standard prenatal care" (Gökçe, 2016, Pg. 232).

**Severe fear of childbirth.** To further explore how fear of childbirth can result in adverse health outcomes, this researcher will discuss *Self-Efficacy in Pregnant Women with Severe Fear of Childbirth* written by Birgitta Salomonsson. This literature was published in 2013 in the Journal of Obstetric, Gynecologic and Neonatal Nursing (JOGNN). The purpose of this study was to identify how self-efficacy and severe fear of childbirth are related concept in the upcoming birth (Salomonsson, 2013).

The instrument used in this study is the Childbirth Self-Efficacy Inventory (CBSEI), which has six variables to provide both outcome expectancy and efficacy expectancy demonstrated by the total score attained at the end of the questionnaire. The six variables identified in this study from the CBSEI, three of which are further explored into subcategories

are as follows: (1) concentration; (2) support, with a subsection of guidance; (3) control, with two subsections of the body's own control and the professionals' control; (4) motor/ relaxation; (5) self-encouragement, with two subsections of reliance and fatalism; and (6) breathing (Salomonsson, 2013).

To accomplish this study, a convenience sample of 19 pregnant women at 25-26 weeks gestation who met the criteria of severe fear of childbirth (SFOC) were recruited participated in this study out of 1000 total women (Salomonsson, 2013). The inclusion criterion were being over the age of 18, receiving routine prenatal appointments, and a normal fetus. The setting of this study was in the southeast region of Sweden (Salomonsson, 2013). In Sweden, antenatal care and labor and delivery are free of charge, with midwives being the primary care providers. However, the clinics in Sweden have FOC teams to minimize poor outcomes of delivery (Salomonsson, 2013).

The Methodology includes a qualitative design by performing a deductive approach following by an inductive approach (Salomonsson, 2013). To perform an initial analysis, the researchers used the behavioral domains of the CBSEI to understand how the women concentrated, self-encouraged, maintained control, and though (Salomonsson, 2013). Following this initial analysis, was an inductive approach to test the body of knowledge women had surrounding childbirth (Salomonsson, 2013). The researchers gathered the data using transcripts from semistructured interviews (Salomonsson, 2013). The instrument used in this study was the Wijma Delivery expectancy Questionnaire (W-DEQ-A) to discover which women, out of 1000 total candidates, scored above an 85, indicative of severe fear of childbirth (Salomonsson, 2013).

The women with SFOC had decreased self-efficacy and some women requested cesarean delivery to avoid having a vaginal delivery (Salomonsson, 2013). The women expressed that positive and encouraging pep talks were helpful, therefore guidance is a key support system factor in women suffering from SFOC (Salomonsson, 2013). For women to have positive birth experiences, women prefer decision-making, however women suffering from SFOC may not benefit from their own decision-making (Salomonsson, 2013). For the domain of fatalism, women with SFOC in delivery reported symptoms of feeling trapped in their own bodies and experience threatened, dangerous emotions (Salomonsson, 2013). One limitation of this study was that the CBSEI framework did not fully cover self-efficacy in a SFOC context. However, because the CBSEI is an instrument with high validity, the researchers believed it would be the strongest instrument used in this research study. Another strength of this study were validity from using the the W-DEQ-A to measure FOC.

Women with SFOC have a more complex problem than just managing pain and anxiety, but women suffering from SFOC need to be identified using the CBSEI or alternate screening method. In performing screening procedures, women can further become educated on supportive behaviors the body can use during childbirth, such as behavioral and cognitive coping strategies. This in collaboration with a strong support system and verbal guidance of a professional with the women's best interests and outcomes in mind all contribute to an overall positive birthing experience, and the potential to reduce the population of women suffering from SFOC and any long-term postpartum implications associated with such fear.

## Rise in Cesarean Sections

**Increased infant mortality rates.** To further explore how the rise of cesarean deliveries can result in adverse health outcomes, this researcher will discuss *Higher Cesarean Delivery Rates are Associated with Higher Infant Mortality Rates in Industrialized Countries* written by Ri-hua Xie. This literature was published in 2015 in the Birth Journal. The purpose of this study was to examine and correlate cesarean delivery rates and infant mortality rates in industrialized countries, published by the World Health Organization.

To accomplish this study, the researchers analyzed data from cesarean delivery rates of 119 countries from 1991 to 2003 (Xie, 2015). Industrialized countries were the inclusion criteria for the study, which were 31 countries total, as a prior study discovered that low-income countries had an annual cesarean delivery rate of less than ten percent; however industrialized countries with middle to higher-income nations had an average cesarean delivery rate of thirty percent (Xie, 2015). The Methodology includes a quantitative design by performing a multi-linear regression analysis (Xie, 2015). The researchers gathered the data using instruments from the World Health Organization, the Organization for Economic Cooperation and Development, and the World Bank (Xie, 2015). Further, to specify how cesarean delivery rates and infant mortality were correlated, several variables were assessed: "(1) cesarean delivery as the independent variable; (2) cesarean delivery, maternal age, and infant sex as the independent variables; (3) cesarean delivery, maternal age, infant sex, GDP per capita, and Gini index as the independent variables; and (4) cesarean delivery, maternal age, infant sex, GDP per capita, Gini index, and preterm birth as the independent variables" (Xie, 2015, Pg. 64).

The World Health Organization (WHO) recommends a cesarean delivery rate no higher than fifteen percent of all deliveries annually. The results in this research study revealed that industrialized countries have a median cesarean delivery rate of 25.3% ranging from 15.6%-50.0% (Xie, 2015). In addition, the median infant mortality rate was 3.5 per 1000 live births, with a range from 1.9 to 6.8 per 1000 live births annually. Therefore, countries with higher cesarean delivery rates have an increased incidence of infant mortality rates (WHO, 2015). The limitations of this study include perinatal outcomes from the use of reproductive technology. In addition, various countries may define infant mortality differently, therefore this may affect the comparison of international sources (Xie, 2015). The strengths of this study include data restriction of highly reliable data that is publicly available. In addition, all data from high-income countries were included to exclude any biases (Xie, 2015).

The key findings of this study reveal that there is a significant positive association among cesarean delivery rates and infant mortality rates. Not one high-income country met the WHO's criteria for having a cesarean rate below fifteen percent, however more than half of all the countries in this study had cesarean deliveries less than or equal to twenty-five percent, a quarter of all deliveries (Xie, 2015). Subsequently, there were three countries that had a cesarean rate more than double the WHO's recommendation: Greece (50.0%), Korea (35.2%), and Portugal (35.8%) (Xie, 2015).

This study suggested some important implications for nursing regarding cesarean delivery rates and neonatal mortality rates. When cesarean deliveries in a country becomes excessive in pregnancies without complications, the benefits for neonates decrease and becomes extremely risky towards infants' health. Elective cesarean deliveries shorten the gestational

duration, may negatively affect lung health and breastfeeding, and increase the risk of infection (Xie, 2015). Whereas the initial goals of cesarean delivery were to save maternal and neonatal lives in pregnancies with complications, such as "reducing health sequelae from vaginal birth; such as hypoxia from prolonged labor and injury of bodily organs" (Xie, 2015, Pg. 63). The cesarean epidemic among high-income industrialized nations is unacceptable, and rather than saving maternal and neonatal lives, now a percentage suffer from avoidable losses as an adverse outcome to an unnecessary procedure. Countries, such as Greece, will need to be researched further to understand why the cesarean delivery rate is 50%, half of all deliveries.

**Greek childbirth efficacy.** To further explore how the rise of cesarean deliveries can result in adverse health outcomes, this researcher will discuss *Childbirth Efficacy: Validating the Childbirth Self-efficacy Inventory in a Greek Sample of Pregnant Women* written by Kleanthi Gourounti. This literature was published in 2015 in the Midwifery Journal. The purpose of this study was to translate the Childbirth Self-Efficacy Inventory (CBSEI) from English to Greek, then use the CBSEI to measure the self-efficacy in a sample of Greek women, as Greece has the highest number of cesarean deliveries in a year.

To accomplish this study, a sample of 145 women in their third trimester of pregnancy. The inclusion criterion were being able to read and write in Greek, a low-risk singleton pregnancy, and first time mothers (Gourounti, 2015). The setting of this study took place in one maternity clinic in Athens, Greece (Gourounti, 2015). The Methodology includes a quantitative design by performing a cross-sectional study (Gourounti, 2015). The researchers gathered the data using three instruments: the first instrument is the CBSEI with the variables of outcome expectancy and efficacy expectancy. The second instrument is the Rosenberg Self-Esteem Scale

(SES), measuring the variables of self-worth and self-acceptance (Gourounti, 2015). The third instrument used in this study is the Life Orientation Test (LOT-R), which measures a woman's level of optimism (Gourounti, 2015).

Approximately twenty percent of the women who participated in this study stated their intention was to request a cesarean section as a primary birthing method (Gourounti, 2015). It was discovered that a majority of the participants had recently attended antenatal education, thus boosting the efficacy expectancy scales of some of the women (Gourounti, 2015). The women that reported greater outcome expectancy and efficacy also had increased optimism and self-efficacy, thus the likelihood of creating a more positive birth experience (Gourounti, 2015). In addition, women who reported lower outcome expectancy and efficacy expectancy were the women who requested birth by cesarean section (Gourounti, 2015). The limitations of this study are that the sample of women were populated in one city at one hospital in Athens, Greece, and should be extended further. In addition, most women in the study were married and had higher education, thus not fully representing the population of all pregnant women in Greece.

The CBSEI has been translated in several languages, making it useful across several cultures. As an Implication for nursing practice, this study has suggested that the CBSEI can be helpful in evaluating pregnant women to assess the need for antenatal education. This practice will also identify women who score a lower self-efficacy, suggesting that cesarean sections may be requested without fully investigating all the options within the continuum of labor and delivery. Greece has the highest percentage of cesarean sections out of all the countries that report to the World Health Organization (WHO), thus by having a reduced number of women requesting birth by cesarean (approximately twenty percent), antenatal education has

tremendously educated and better prepared women by increasing their self-efficacy. WHO recommends that the cesarean delivery rate should be between ten to fifteen percent of all births, when justified to prevent fetal or maternal mortality, or both (WHO, 2015). However, by reducing a small sample of women to twenty percent as the nation averages fifty percent, if this study were expanded nationwide, then Greece could be one step closer to falling within the parameters that WHO has created.

**Elective cesarean delivery.** To further explore how the rise of elective cesarean deliveries can result in adverse health outcomes, this researcher will discuss *Elective cesarean delivery: A mixed method qualitative investigation* written by Holly Kennedy. This literature was published in 2012 in the Midwifery Journal. The purpose of this study was to explore the complex, multifactorial aims or intentions of both women's and clinicians' choices surrounding elective cesarean delivery (Kennedy, 2012).

To accomplish this study, a sample of 27 women and 34 health professionals in the obstetric practice, such as midwives, obstetricians, and anesthesiologists. The inclusion criterion were being a health professional in one of the listed fields, and there was no exclusion criteria among the women. This study took place at two English National Health Service Maternity Providers at an inner-city setting. The Methodology included a qualitative mixed-method design using ethnographic research as well as utilizing narrative methods to accomplish the purpose of the study to uncover the phenomena (Kennedy, 2012). The researchers gathered the data by interviewing the women once in person, with a follow-up conversation over the telephone to clarify any findings. The health professionals attended a formal interview, and asked to provide field notes and formal observations (Kennedy, 2012). Field observations included family

interactions during antepartum periods, clinical observations, care in the hospital, midwifery birthing centers, and ambulatory settings (Kennedy, 2012). The data also included observations regarding conversations surrounding Vaginal Birth After Cesarean (VBAC). A total of 1500 hours were spent observing in the field to provide a full understanding regarding the complex decisions surrounding birthing choices, the uncertainty of such choices; and how to manage VBAC and Elective cesarean birth (Kennedy, 2012).

Four themes were identified during the interviews of the women's perceptions of: the culture of cesarean; cesarean counselling; perceptions of choice; and negotiation of the rules (Kennedy, 2012). In this particular study, the average elective cesarean rate was 6% (Kennedy, 2012). The women that chose elective cesarean were educated on all the risks, and the health team positively encouraged an option of VBAC for all eligible women, rather than repeat cesarean for subsequent pregnancies (Kennedy, 2012). Vaginal delivery is optimal, and should be the goal for most women. VBAC results in decreased morbidity for both mom and baby; for women that chose subsequent elective cesarean, they were referred to consult with a specialist before having the surgery.

Some limitations of the study include the location in which the study took place. Only two hospitals in England were surveyed, so it is likely that other perinatal settings may have a varying degree of observational results (Kennedy, 2012). Also, in this study, midwives and obstetricians favor VBAC. For women to have VBAC, they have to qualify, not have any risk factors preventing them from delivering vaginally, receive care at a hospital that provides VBAC with an on-call anesthesiologist, and have continued encouragement by their health care practitioners.

The aim for this article was to target women in their subsequent pregnancies following cesarean delivery. The health professionals in the sample used detailed counselling sessions to emphasize the importance of making informed choices, and descriptions of the complexities surrounding VBAC in comparison to a second elective cesarean. Counselling and providing patient education regarding the risks associated with elective cesarean, provides women with the best opportunity to make an informed choice. Despite the method of delivery, the consensus is that women want the best outcome on the behalf of their babies. Unfortunately, how choice is attained varies from one woman to the next. And choice becomes challenging when a woman's choice falls outside of commonly accepted guidelines. Recommendations include using evidence-based practice to continue exploring how to best communicate patient education for informative decision-making. Many women suffer from a state of amnesia during labor and delivery, so the interdisciplinary care team did an excellent job with composing all the details to best illustrate a picture for the woman to understand fully her prior delivery. This puzzle also contributes to composing a risk assessment to determine if options other than repeat cesarean are indeed suitable options.

Counselling in this study was a cornerstone with how the care team interpreted the evidence provided in the chart regarding the woman's prior experiences and to communicate evidence supporting the benefit of vaginal delivery, rather than cesarean. The goal is to empower women so they could eventually make their own choices, but still have the control they seek in participating in their care. Counselling just offered additional encouragement when it came to making choices surrounding method of delivery.

**Cesarean Delivery Versus Vaginal Delivery.** To further explore how the rise of elective cesarean deliveries can result in adverse health outcomes, this researcher will discuss *The Differences Between Pregnant Women who Request Elective Caesarean and those who Plan for Vaginal Birth Based on Health Belief Model* written by Fatemeh Darsareh. This literature was published in 2016 in the Journal of Women and Birth. The purpose of this study was to discover low-risk, healthy women continue to choose to have elective cesarean section. The researchers plan to explore if women are properly educated regarding the risks, prior to undergoing a cesarean without medical indication (Darsareh, 2016). The theoretical framework used in this study was a tool to help assess the woman's knowledge of the risks and various complications. The questionnaire was based on the Health Belief Model, and can be a predictor or early indicator of a woman's preferred method of delivery.

To accomplish this study, 470 women were recruited from the target population for the sample were women of childbearing years, in their third trimester of pregnancy. The inclusion criteria composed of a minimum maternal age of fifteen years old, first pregnancy, and no serious chronic medical conditions/ history of infertility. The women also need to be between 28-36 weeks gestation of a singleton pregnancy. Farsi as the primary spoken language; the ability to read and write; and permanent residence in the Hormozgan province of Iran (Darsareh, 2016). The setting was a natural setting, therefore the environment was not manipulated for this particular study. The Methodology includes a quantitative cross-sectional study of seven hospitals from May to October 2015 (Darsareh, 2016). The researchers gathered the data for this study by using an instrument called The Maternal Health Belief Questionnaire (MHBQ). The MHBQ is a thirty-seven item questionnaire with six subcategories/ variables, indicating delivery

preference, barriers and benefits toward vaginal birth, and perceptions of health risks to mother or child. Each subcategory of the MHBQ had its own scale, however, the higher the scores indicated that the mother perceived higher risks associated with cesarean delivery, and increased likelihood of delivering vaginally. Women that scored lower, also had lower self-efficacy, decreased knowledge of risks of cesarean, and an increased incidence of requesting delivery by cesarean due to a decreased perception of their ability to delivery vaginally.

Once the questionnaires from all women were collected and reviewed, the results of this study were astounding. Overall, 287 (61.1%) participants planned to have a vaginal birth and the remaining 183 (38.9%) participants planned to have an elective cesarean birth (Darsareh, 2016). Additionally, the findings indicated that women with a decreased maternal self-efficacy increased the likelihood of planning for a cesarean delivery (Darsareh, 2016). An interesting finding of this study, is that social factors, such as level of education and occupation, were identified as factors related to requests for cesarean delivery. According to the findings in this study, the cesarean group had a significantly higher level of education than the vaginal group (Darsareh, 2016).

This study does pose some limitations; this particular study took place in Iran, and the women included in the study have to be Farsi-speaking and live in the Hormozgan province (Darsareh, 2016). Another limitation was the relationship between age and the mode of birth. The women in the cesarean group were older than the women in the vaginal group, that relationship has yet to be investigated (Darsareh, 2016). The strengths of this study was the demonstration of how the MHBQ was used as a tool to better understand how maternal beliefs impact and influence birthing choices (Darsareh, 2016). There is an indirect correlational

relationship between self-efficacy and elective cesarean planning. Therefore, women with higher self-efficacy, have more belief in their abilities to deliver vaginally, whereas women with lower self-efficacy request increased elective cesarean deliveries.

The implication for nursing practice is that health care providers are recommended to incorporate these findings into holistic assessments throughout the continuity of care. It would be best if in addition to addressing a woman's physical needs, this study can be a tool that providers can utilize to address physiological, psychological, and cognitive needs surrounding women's first pregnancies. Despite socioeconomic status, all women participating in this study received regular prenatal care, and a majority were under the care of an obstetrician rather than a midwife. In one of the primary sources, a survey revealed that an obstetrician in Maine was willing to perform a cesarean by maternal request for 84.5% of cases. The concern is that obstetricians are pushing women toward elective cesarean, implying that it is needed, when in fact there are no present risk factors or indications for cesarean. An area for further research is to explore if certain factors address the Obstetrician push toward elective caesareans, such as: receipt of financial incentives, benefits from the convenience of planning when to be present at the hospital, decreased physician fatigue, and various legal issues.

**Medical intervention: the norm in most countries.** To further explore how the rise of elective cesarean deliveries can result in adverse health outcomes, this researcher will discuss *The Effect of PRECEDE PROCEED Model Combined with the Health Belief Model and the Theory of Self-Efficacy to Increase Normal Delivery Among Nulliparous Women* written by M. Khorsandi. This literature was published in 2012 in the Procedia Journal of Social and Behavioral Sciences. The purpose of this study was to investigate how the combination of the

Precede-Proceed Model, Health Belief Model, and the theory of Self-Efficacy can be combined to promote normal vaginal delivery among nulliparous women. The researchers plan to use a control group and an experimental interventional group which offers nine antenatal education sessions to discover if women that receive education beyond the routine prenatal visits will be a factor in reducing the cesarean epidemic (Khorsandi, 2012). Previous studies have shown that women who had elective cesarean deliveries, are twice as likely to prefer repeat cesarean deliveries, rather than women who had to have emergency cesarean sections (Khorsandi, 2012).

The theoretical framework in this study uses integrated sections derived from the Precede-Proceed Model, Bandura's Theory of Self-Efficacy and the Health Belief Model. The variables used from the Health Belief Model are the predisposing factors and the perceived barriers of childbirth. Predisposing factors include the physiology of childbirth surrounding informed choices of delivery methods, coping mechanisms and distraction techniques, and the risks and benefits of surgical delivery. Also, perceived susceptibility is the strongest predictor of preventive health behaviors--"the action a woman will take to prevent or control a problem if they perceive themselves susceptible" (Khorsandi, 2012, Pg. 188). Perceived barriers are the level of childbirth education a woman has. Self-efficacy measures the level of anxiety during the antepartum and postpartum periods, and this theory suggests that women with higher levels of self-efficacy will have decreased levels of anxiety. To collect this data, the researchers will use several instruments such as the Lowe's childbirth self-efficacy inventory (a culturally adapted and translated model of the childbirth self-efficacy inventory), Hartman's questionnaire of attitudes of childbirth, and checklists for recording labor-specific relaxation and pregnancy outcomes (Khorsandi, 2012).

It was thought by the researchers that the Iranian women request cesarean deliveries to avoid labor pain, which correlates to a fear of childbirth and lack of antenatal education to adequately prepare women for childbirth by using various coping mechanisms. To accomplish this study, 256 women were selected in prenatal clinics to fill out FOC questionnaires. 120 women met the criteria that scored a 28 or higher on a scale to measure fear of childbirth, and were then equally divided into each group, control and experimental (Khorsandi, 2012). The inclusion criteria composed of low-risk singleton pregnancies, nulliparous women ages 25-35 years old, gestational age of thirteen weeks or greater, and had a childbirth attitude score (CAQ) of 28 or greater (Khorsandi, 2012). The setting of the study was conducted in the maternity unit of a teaching hospital in Iran. The Methodology includes a quantitative semi-experimental study (Khorsandi, 2012).

The results of this study showed that "the experimental group achieved higher scores than the control group when it came to predisposing factors (knowledge and attitude), enabling factors, and reinforcing factors" (Khorsandi, 2012, Pg. 190). By the third trimester, women in the control group already had a negative attitude toward normal vaginal delivery, informing the researchers that counselling for mode of pregnancy should take place earlier in the pregnancy. Perceived benefits of normal vaginal delivery increased among the experimental group. Fear of childbirth scores decreased by almost ten points in the experimental group, whereas the control group's mean scores only decreased by approximately two points. A key finding of this study was that with the experimental group, 76% planned a normal vaginal delivery, whereas only 46% of the control group were planning a vaginal delivery (Khorsandi, 2012). As a result, 37% of women from the control group had elective cesarean deliveries, whereas only 7% from the

experimental group had elective cesarean deliveries (Khorsandi, 2012). Another finding indicates that a husband's role is also an important determinant of maternal preference.

As implications for nursing practice, these results demonstrate that maternal preference for a normal vaginal delivery can increase after an intervention of antepartum education, ideally in the second trimester of pregnancy. This study used relaxation and birth preparation classes, led by nurses, and overall reduced the cesarean rate for low-risk pregnancies. And for women that suffer from fear of childbirth, additional psychosomatic support can also help to reduce levels of anxiety. Medical intervention as the norm for delivery has only been on the rise in the last few centuries, whereas childbirth was originally a natural, social-event and completely non-medical (Khorsandi, 2012). Medical intervention in childbirth is a major reason for a greater dependence on science and a decreased capability in a woman's own ability to endure childbirth-- thus a primary reason for an increase of the international public health concern.

**Health Beliefs**

**Sense of control: changing birthing positions.** To further explore how health beliefs can help women to create comfort during delivery resulting in positive birth outcomes, this researcher will discuss *Influence on Birthing Positions Affects Women's Sense of Control in Second Stage of Labor* written by Marianne Nieuwenhuijze. This literature was published in 2013 in the Midwifery Journal. The purpose of this study was to explore the relationship between birthing positions and a sense of control during the second stage of labor (Nieuwenhuijze, 2013).

To accomplish this study, 487 midwifery practices were invited to participate between October 2005 and December 2007. 1030 women from 54 different midwifery practices agreed

to participate in the study. The women selected had to meet the inclusion criteria of speaking fluent Dutch and receive primary prenatal care from a midwife. The women included also had physiological pregnancies and birth, which means that the women in this study did not have medical interventions such as epidural analgesia, augmented labor, or continuous fetal monitoring (Nieuwenhuijze, 2013). The setting of the study was across several midwifery practices throughout the Netherlands. The Methodology includes a quantitative design from a self-report questionnaire. The researchers gathered the data for this study by using two instruments. The first instrument was called the Labour Agentry Scale (LAS) to measure a sense of control during the second stage of labor (Nieuwenhuijze, 2013). The second instrument was the Visual Analogue Scale (VAS-pain) which was used to collect how a woman recalled pain throughout the second stage of labor and again four hours postpartum. The VAS also measured a woman's feelings towards birth. Variables assessed in correlation with these two instruments were various birthing positions: (1) supine; (2) lateral; (3) semi-Fowler's or high-Fowler's; (4) standing; (5) squatting; (6) hands and knees; (7) birthing stool; (8) and in the bath tub (Nieuwenhuijze, 2013).

The results of this study found that women that undergo a physiological pregnancy and birth with control over birthing positions, attend antenatal education classes, and feelings about the birth were all important factors in predicting a sense of control in delivery (Nieuwenhuijze, 2013). Fulfilling a specific position of preference was not significant in this study, however the process of being involved and having a voice in the delivery room seems to have a greater impact on a positive birthing experience (Nieuwenhuijze, 2013). Limitations of this study included a minority of women requesting a position other than supine, which perhaps the women

were unaware of other birthing positions as options during delivery. In addition, the midwifery practices that participated in the study were self-selected (Nieuwenhuijze, 2013). A strength of this study was that it focused on women, specifically who had physiological pregnancies and births. Birthing positions were determined by a woman's willingness to assert control, and not limited by medical interventions and adverse circumstances. Although not all deliveries were without unforeseen complications, even with a physiological approach, women were able to still able to overcome those complications and give birth vaginally.

This finding was an important implication of nursing because all women in the delivery room are different, and may feel different as the second stage of labor begins as childbirth is extremely dynamic. Staying committed to a specific position in delivery is not as relevant as that may be unpredictable. However, what is of extreme importance is the woman still feeling a sense of control in delivery. This was confirmed by a primary care provider being a midwife, having a support system, as most women like to share the burden of decision-making. This shared decision-making reinforces that a woman is not alone through her journey of labor and delivery, but it keeps the line of communication open, a necessity for a woman in labor.

Women who choose to have home births or in a birthing facility in comparison to a hospital room seems to have an increased impact on a woman's sense of control when it comes to less common birthing positions (Nieuwenhuijze, 2013). A woman's sense of control can also be strongly affected by level of pain throughout labor. With an increased sense of control, women have a greater level of coping mechanisms that can be used to combat pain. Therefore, a positive birth experience is not solely based on level of pain. Pain is a complex multifaceted process during labor and delivery, and positive birthing experiences come from how to channel

and control the pain that is inevitable. By having healthcare professionals, such as midwives, that are dedicated in advocating and providing support to women in labor is an important role that should not be overlooked. Overall, a trusting member of the healthcare team that helps to find multiple positions that create the most comfort and keeps the dialogue open are what create positive birthing experiences.

**Yoga in pregnancy.** To further explore how health beliefs can help women to create comfort during delivery resulting in positive birth outcomes, this researcher will discuss *A Qualitative Study Exploring How the Aims, Language and Actions of Yoga for Pregnancy Teachers May Impact Upon Women's Self-Efficacy for Labour and Birth* written by Virginia Campbell. This literature was published in 2016 in the Journal of Women and Birth. The purpose of this study was to decipher if yoga for pregnancy (YfP) has the potential for increasing childbirth self-efficacy during labor and birth. This practice can help women manage the intense physical sensations of labour and increase the confidence they feel (Campbell, 2016).

To accomplish this study, three instructors from the National Childbirth Trust were recruited for running a YfP catering to over 1500 pregnant women monthly across four UK countries (Campbell, 2016). Participation was restricted to instructors from this particular organization. The setting for the interviews took place in the yoga instructors' homes, for approximately two hours each. The women discussed in this study attend YfP classes in addition to routine prenatal visits, as well as midwife-led antenatal education. Each YfP class offers introductions in the beginning of the session, an hour of yoga postures, breathing patterns, relaxation techniques, as well as refreshments and socialization, and a platform to visit with a

past member who recently had their baby (Campbell, 2016). The Methodology includes a qualitative study using semi-structured interviews, and analyzed using grounded theory.

The researchers gathered the data for this study by filming two sessions led by each teacher in September 2013. The interviews and class recordings were transcribed verbatim to analyze the findings, and from the data, four themes emerged. The first theme is the creation of a sisterhood. The YfP class gave women a safe and supportive environment, allowed a platform for women to share their experiences and hear experiences from others, women were able to learn from one another, and the class provided a special bonding time between mom and baby (Campbell, 2016). The second theme is modelling labor by teaching techniques for the woman's body to adapt and cope during labor, and allowed time to visualize what labor will be like. The women learned breathing patterns associated with positive guided imagery, women were reminded at least thirty-five time each session to listen to their bodies and only participate in actions that felt comfortable to them, and the women were encouraged to practice for labor through rocking movements and breathing patterns (Campbell, 2016). The third theme is "building a woman's confidence and trust in their innate ability to give birth to their babies" (Campbell, 2016, Pg. 6). Building confidence allowed women to be in control and taught various birthing positions, promoted feelings of positivity with how beautiful the birthing experience is, and changing negative beliefs into positive ones (Campbell, 2016). The fourth theme that emerged from the data was enhancing the learning process. The teachers gave women an atmosphere based on relaxation and positivity, in addition the class had ample opportunity for bonding and togetherness, the class always had a rhythm and balance by taking

the time to just focus on themselves and their babies, and lastly the women were able to absorb information in several different ways (Campbell, 2016).

The limitations in this study circulate around an area that has not been well-researched. This study focused on women that are attending antenatal education and YfP classes and do not submit to pharmacological pain management during labor. Also, this study had a small number of participants. The key findings of this study uncovered that pregnant women enjoy learning in small peer groups by sharing hints and tips with one another, and gain insight by hearing and sharing experiences with one another. As an implication for nursing practice, childbirth is not just a physical experience. Moreso, it is a holistic experience that affects women physically, but also in the psychosocial, mental, and spiritual domains. Prenatal yoga classes were effective in allowing women to manage pain during labor, and YfP may facilitate an increase in childbirth self-efficacy. By focusing not solely on yoga poses, but by providing socialization and a safe environment, women can discuss hopes and fears among peers. This is the epitome of creating a sisterhood, enhancing learning, modelling labor, and building confidence.

## Literature Review Implications

Elective cesarean delivery is a problem in the field of nursing because practitioners are generally overloaded with so many patients, that most women feel like they cannot gather their thoughts quick enough to ask their questions in a timely fashion. And in other situations, the practitioner simply rejects detailed questions, by providing broken and incomplete answers. This culture of fast tracking patients does not benefit, but in fact harms patients by making uninformed choices. Many women also perceive that their health care personnel did not adequately meet their needs, and her expectations for delivery become diminished. In nursing

practice, an increase of self-efficacy can occur with the promotion of counselling, as it provides women with an intimate one-on-one informational session, allowing her to feel important and provides a platform to ask any questions to offer her peace of mind, thus meeting her essential needs.

In addition, counselling also alters a woman's initial perception of choice. Many women choose to have elective cesarean for subsequent pregnancies as a result of a negative experience or a traumatic first delivery. Some women do not realize that risks apply to them, and she's willing to take the maternal risks if it benefits fetal outcomes; or others specifically requested evidence of risks in relation to them. Other reasons are the false perception that a VBAC will have damaging effects to the vagina. Ultimately, counselling provides women with a sense of autonomy. Then her provider can provide risks and benefits of vaginal and cesarean deliveries, inform her what the default guidelines are, assess her antepartum level of self-efficacy and fear of childbirth, and make clinical recommendations in relation to evidenced-based practice.

In Kennedy's (2013) research study, *Elective cesarean delivery: A mixed method qualitative investigation,* the author of this paper was thoroughly concerned that 88% of women in the study identified learning about elective cesarean from their obstetricians. Most women electing cesarean sections are first-time mothers with no firsthand experience with delivery, second-time mothers that had a traumatic/ complicated first vaginal delivery, convenience of planning a date (control and choice), or women fear the pain of a vaginal delivery. Thus, providing information about the various modes of delivery, but not educating women on the risks associated with each mode of delivery. Many women choose to have a cesarean, as they believe it will prevent future problems with pelvic floor dysfunction, urinary incontinence, or sexual

dysfunction. When in fact, a woman with cesarean delivery is also at risk for development of these problems, in addition to all the complications and risks associated with surgery.

The risks for a baby born to a mother with an elective cesarean is prematurity, low birth weight, admission to the neonatal intensive care unit, current and lifelong health complications, and death in the first year of life. The mother increases her risks for hemorrhage and uterine infection increase, early deliveries result in longer hospital stays and increased recovery time. If the mother plans on having additional children, she also increases her risk for having placental implantation problems, placental abruption, placenta previa, uterine rupture, or bowel/ bladder injuries. One or more of these risk factors may also lead to a hysterectomy, therefore if women desire to have additional children, elective cesareans are not the preferred mode of delivery.

Because of the alarming nature of the rise of cesareans, and the risks that cesarean delivery entails, The Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN) offer a campaign to educate and empower women. The goal provides women *40 reasons to go the full 40.* This campaign provides forty ways to increase self-efficacy, simply by catering to herself and her baby; compelling reasons to simply wait a few more days, weeks, or however long it takes for a baby to fully mature and prepare for body's natural delivery process.

In addition, each of these research studies reached similar conclusions that women that attend routine prenatal appointments are not provided with enough knowledge regarding emotions, bodily changes, and coping mechanisms in the intrapartum period. Many of these studies took place are areas where the cesarean epidemic is on the rise, and to reduce those numbers significantly by informing women that antepartum education is a key and important factor of pregnancy needs to be emphasized by the entire healthcare team. In Beebe's (2007)

study, *The Effects of Childbirth Self-Efficacy and Anxiety During Pregnancy on Prehospitalization Labor,* the various coping strategies that women would learn in antepartum education are outlined. Behavioral strategies allowed women to stay home longer in early labor, such as: "routine house activities--housework, errands, eating, drinking; timing contractions; distraction--watching television, reading, working on puzzles; resting--napping; showering/ bathing; moving--walking, changing positions, exercise, rocking on exercise ball; breathing--patterned; massage and effleurage; gathering supportive persons; vocalizing--talking, yelling, moaning, and crying; and using props--pillows, heating pads, birthing balls, rocking chairs, and swimming pools" (Beebe, 2007, Pg. 415). Cognitive strategies helped women to have decreased pain during prehospitalization labor and helped women cope throughout the labor process, such as: "meditation, guided imagery, concentration/ focusing, denial/ ignoring, counting, quieting/ social withdrawal, remember past learning experiences/ stories/ plans, give up fighting body/ withstand, and inner dialogue: self-affirmations, self-coaching" (Beebe, 2007, Pg. 415).

Ideally, a woman would spend a large quantity of her pregnancy practicing these behavioral and cognitive strategies, so she might naturally begin to do them when the process of labor and delivery begins. A goal for nursing practice would be to normalize vaginal delivery and to be an advocate and primary supportive person for the woman in labor. To change the culture surrounding childbirth, the goal is to avoid the first cesarean section, thus reducing the number of repeat cesareans performed each year. Obstetric nursing goals should include helping women to empower themselve and to take choice surrounding their birthing plan, rather than succumbing to the pressure from family or the obstetrician. These research studies have revealed

that the major barriers to preventing this climate of change is a severe fear of childbirth. However, this fear does not automatically become resolved through cesarean delivery. Rather this FOC can translate to increased anxiety, PTSD, and complications for both the mother and the neonate. For women that seek prenatal care, it should be the goal of the healthcare team to intervene from the beginning, that way fears can be readily addressed, and it can be discovered what factors are really preventing choice for women if they are properly educated.

Whereas women that do not have access to health care, or the first contact made is on the labor and delivery unit, obstetric nurses have a duty to teach women as many of these coping mechanisms during delivery, and really explain what factors prolong delivery and what methods help relieve pain. By providing dedicated support and advocacy, and not allowing obstetricians to assert control over medical interventions in the delivery room, the intrapartum nurse can encourage normal vaginal delivery, and explain the dangers of having a cesarean delivery without a medical indication.

## Theoretical Framework

The theoretical framework that has been discussed in this project is the Health Belief Model (HBM). This framework originated in the early 1950s as a psychological theory to understand the response of one's behavior to a diagnosis, and how one would incorporate adaptive regimens to this new illness in a public health setting (Glanz, 2008). Since then, the HBM has been reconstructed to support various interventions of ways to change a patient's behavior, and is one of the most widely used frameworks in healthcare today (Glanz, 2008). The HBM has six keys concepts that are discussed to prevent, screen, or control illnesses from

occurring. These concepts are perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Glanz, 2008).

Perceived susceptibility is based on the belief of one's likelihood of contracting an illness or disease, to promote seeking out healthcare services. Such as, the belief that one may get colorectal cancer will prompt seeking a colonoscopy. Perceived severity are the feelings associated with contracting an illness and the consequences that may arise, such as disability or death and how family life and employment may be affected by this illness. Together, these two concepts form an umbrella term in the HBM as "perceived threat." To identify patients' perceived threat according to the HBM, nurses must identify populations at risk, and if the patient's actual risk is increased, then specific consequences of the sequelae should be discussed (Glanz, 2008).

The next concept is the perceived benefit associated with the action a person will take to reduce the risks or seriousness of an illness. These are known as preventative measures for lifestyle-associated factors. Inversely, the fourth concept includes perceived barriers--tangible and psychological consequences that are believed, by the patient, are a result of a specific disease-process. This could be expressed as a mental cost-benefit analysis that a person may weigh when it comes to seeking out treatment options. The next concept are cues to action, strategies that promote awareness of an issue. And the final concept is self-efficacy, which is the confidence in one's ability to take a specific action, or the believability that one can alter their behavior for a desired outcome.

Health perceptions are usually formulated by level of knowledge and modifying factors. Modifying factors can be the characteristics which make pain better or worse. Some examples

include sociodemographic information like age, gender, personality type, and ethnicity. These perceptions affect the individual beliefs constructed by the HBM. The health belief model has been utilized to research how, among the six constructs, outcomes can be predicted. Several studies have found that perceived barriers are the strongest single concept that has the ability to predict specific behaviors (Glanz, 2008). Whereas in this literature review, the construct continuously explored is how the self-efficacy of women can impact childbirth experiences. The HBM has been useful across many medical and psychosocial specialties for an interventional approach to change behaviors.

However, a challenge of the HBM is the inability to define how the six constructs interact with one another. The relationship between risk and severity when it comes to a perceived threat is not clear, just as relationships between the other dimensions have not been adequately explored. Because of this, many adaptations of the health belief model have been used to find the void in how outcomes are reached within the different realms, and the action to take to achieve specific results. So frequently, cues to action are a component of HBM that are often missing from research. The HBM is a cognitive-specific model, and does not address the emotional component associated with why a person may behave in a specific way. Emotion, such as fear, is a crucial component for why someone may behave in a specific way, and may have a greater influence on behavior in situations. Ultimately, when perceived benefits and barriers have an inverse relationship, cues to action will have a greater influence on human behavior.

Therefore, the integration and consistent exploration of the concepts of the HBM is still very useful and relevant to exploring the phenomenon of many health-related behaviors. This is

important for nursing practice, as nurses can uses models, specifically the Childbirth Self-Efficacy Inventory to assess the level of Self-efficacy of pregnant women or the Wijma Delivery Expectancy/ Experience Questionnaire, to assess fear of childbirth and feelings surrounding childbirth during the antepartum period. By integrating these two key questionnaires during the first or second trimesters, specifically in nulliparous women, women at risk for FOC can be identified early, allowing nurses to intervene by offering an interventional approach to childbirth education.

## Research Proposal

As illustrated by the literature review of this paper, many women with FOC can be identified early in pregnancy. The studies where women received additional intervention, such as participating in prenatal yoga classes, having support groups with other pregnant mothers, and attending childbirth education courses, women reported positive childbirth outcomes, had a higher level of self-efficacy, and less medical intervention or instrumentation was used.

Unfortunately, the gap in knowledge is that women are still continuing to request cesarean sections, or are routinely offered and provided by the obstetrician at an international level. The purpose of this paper is to change the culture surrounding childbirth, specifically by avoiding the first cesarean section from occurring, thus reducing the number of repeat cesareans performed each year. Obstetric Nursing Goals should include helping women to empower themselve and to take choice surrounding their birthing plan, rather than succumbing to the pressure from family or the obstetrician.

These research studies have revealed that the major barriers to preventing this climate of change is a severe fear of childbirth. However, this fear does not automatically become resolved

through cesarean delivery. Rather this FOC can translate to increased anxiety, PTSD, and complications for both the mother and the neonate. For women that seek prenatal care, it should be the goal of the healthcare team to intervene from the beginning, that way fears can be readily addressed, and it can be discovered what factors are really preventing choice for women if they are properly educated.

Therefore, this researcher proposes a study to request participation in all clinical settings where obstetrician and midwife providers offer routine prenatal visits within a fifty mile radius of the San Francisco Bay Area. With the clinics that choose to participate in the study, a sample size of 1000 women will be invited to participate in this study. The inclusion criteria for this study will be first-time pregnant, nulliparous women and less than thirteen weeks of gestation. The instruments this researcher will utilize to assess a baseline efficacy and fear score are: the Childbirth Self-Efficacy Inventory (CBSEI) and the Wijma Delivery Expectancy/ Experience Questionnaire (W-DEQ).

This meta-analysis will identify the women at risk, an additional survey to explore how women received knowledge pertaining to childbirth, if women were planning on attending childbirth education courses, and who in their lives has the biggest impact on decision-making when it comes to childbirth. With this information, this researcher can explore the gap in knowledge of why women are not being properly educated when it comes to childbirth education, and can be the beginning footsteps of paving a new path on how to change the overall culture of fear of childbirth.

# Appendices

**Questionnaire Form Used after Completed C-BSEI & WED-Q Form**

(i)Have you knowledge about painless childbirth?

(a)Yes

(b)No

(ii)Which is the method of painless childbirth that you had knowledge about?

(a)It is provided by inserting a needle in the lower back

(b)It is provided by intramuscular or intravenous drug administration

(c)Other (Acupuncture, deep breathing exercise, e.g.)

(iii)What is the most important source of this knowledge for you?

(a)My friends

(b)Television

(c)Internet

(d)Family Members

(e)Healthcare Provider

(f)Childbirth Education Class

(g)Other

(iv)What is your preferred birth type for the current pregnancy?

(a)Normal vaginal delivery

(b)Elective caesarean section

(v)Which is the most important reason in choosing caesarean section for you?

(a)Fear of pain caused by uterine contractions

(b)Control request delivery time

(c)Fear of perineal tear

(d)Request of tubal ligation

(e)Other

(vi) Would you consider a Normal Vaginal Delivery if educated about the risks of caesarean section

**The Childbirth Self-efficacy Inventory**

**Part I (Labour)**

Think about how you imagine labour will be and feel when you are having contractions 5 minutes apart or less. For each of the following behaviours, indicate how helpful you feel the behaviour could be in helping you cope with this part of labour by circling a number between 1 – not at all helpful and 10 – very helpful.

| | |
|---|---|
| 1. Relax my body | 1 2 3 4 5 6 7 8 9 10 |
| 2. Get ready for each contraction | 1 2 3 4 5 6 7 8 9 10 |
| 3. Use breathing during labour contraction | 1 2 3 4 5 6 7 8 9 10 |
| 4. Keep myself in control | 1 2 3 4 5 6 7 8 9 10 |
| 5. Think about relaxing | 1 2 3 4 5 6 7 8 9 10 |
| 6. Concentrate on an objects in the room to distract myself | 1 2 3 4 5 6 7 8 9 10 |
| 7. Keep myself calm | 1 2 3 4 5 6 7 8 9 10 |
| 8. Concentrate on thinking about the baby | 1 2 3 4 5 6 7 8 9 10 |

| | |
|---|---|
| 9. Stay on top of each contraction | 1 2 3 4 5 6 7 8 9 10 |
| 10. Think positively | 1 2 3 4 5 6 7 8 9 10 |
| 11. Not think about the pain | 1 2 3 4 5 6 7 8 9 10 |
| 12. Tell myself that I can do it | 1 2 3 4 5 6 7 8 9 10 |
| 13. Think about others in my family | 1 2 3 4 5 6 7 8 9 10 |
| 14. Concentrate on getting through one contraction at a time | 1 2 3 4 5 6 7 8 9 10 |
| 15. Listen to encouragement from the person helping me | 1 2 3 4 5 6 7 8 9 10 |

Part I (*Continued*) Continue to think about how you imagine labour will be and feel when you are having contractions 5 minutes apart or less. For each behaviour, indicate how certain you are of your ability to use the behaviour to help you cope with this part of labour by circling a number between 1, not at all sure and 10, completely sure.

| | |
|---|---|
| 16. Relax my body | 1 2 3 4 5 6 7 8 9 10 |
| 17. Get ready for each contraction | 1 2 3 4 5 6 7 8 9 10 |

| | |
|---|---|
| 18. Use breathing during labour contractions | 1 2 3 4 5 6 7 8 9 10 |
| 19. Keep myself in control | 1 2 3 4 5 6 7 8 9 10 |
| 20. Think about relaxing | 1 2 3 4 5 6 7 8 9 10 |
| 21. Concentrate on an object in the room to distract myself | 1 2 3 4 5 6 7 8 9 10 |
| 22. Keep myself calm | 1 2 3 4 5 6 7 8 9 10 |
| 23. Concentrate on thinking about the baby | 1 2 3 4 5 6 7 8 9 10 |
| 24. Stay on top of each contraction | 1 2 3 4 5 6 7 8 9 10 |
| 25. Think positively | 1 2 3 4 5 6 7 8 9 10 |
| 26. Not think about the pain | 1 2 3 4 5 6 7 8 9 10 |
| 27. Tell myself that I can do it | 1 2 3 4 5 6 7 8 9 10 |
| 28. Think about others in my family | 1 2 3 4 5 6 7 8 9 10 |
| 29. Concentrate on getting through one contraction at a time | 1 2 3 4 5 6 7 8 9 10 |

| | |
|---|---|
| 30. Listen to encouragement from the person helping me | 1 2 3 4 5 6 7 8 9 10 |

**Part II (Birth)**

Think about how you image labour will be and feel when you are pushing your baby out to give birth. For each of the following behaviours, indicate how helpful you feel the behaviour could be in helping you cope with this part of labour by circling a number between 1, not at all helpful and 10, very helpful.

| | |
|---|---|
| 31. Relax my body | 1 2 3 4 5 6 7 8 9 10 |
| 32. Get ready for each contraction | 1 2 3 4 5 6 7 8 9 10 |
| 33. Use breathing during labour contraction | 1 2 3 4 5 6 7 8 9 10 |
| 34. Keep myself in control | 1 2 3 4 5 6 7 8 9 10 |
| 35. Think about relaxing | 1 2 3 4 5 6 7 8 9 10 |
| 36. Concentrate on an objects in the room to distract myself | 1 2 3 4 5 6 7 8 9 10 |
| 37. Keep myself calm | 1 2 3 4 5 6 7 8 9 10 |
| 38. Concentrate on thinking about the baby | 1 2 3 4 5 6 7 8 9 10 |
| 39. Stay on top of each contraction | 1 2 3 4 5 6 7 8 9 10 |

| | |
|---|---|
| 40. Think positively | 1 2 3 4 5 6 7 8 9 10 |
| 41. Not think about the pain | 1 2 3 4 5 6 7 8 9 10 |
| 42. Tell myself that I can do it | 1 2 3 4 5 6 7 8 9 10 |
| 43. Think about others in my family | 1 2 3 4 5 6 7 8 9 10 |
| 44. Concentrate on getting through one contraction at a time | 1 2 3 4 5 6 7 8 9 10 |
| 45. Focus on the person helping me in labour | 1 2 3 4 5 6 7 8 9 10 |
| 46. Listen to encouragement from the person helping me | 1 2 3 4 5 6 7 8 9 10 |

Part II (*Continued*) Continue to think about how you imagine labour will be and feel when you are pushing your baby out to give birth. For each behaviour, indicate how certain you are of your ability to use the behaviour to help you cope with this part of labour by circling a number between 1, not all sure and 10, completely sure.

| | |
|---|---|
| 47. Relax my body | 1 2 3 4 5 6 7 8 9 10 |
| 48. Get ready for each contraction | 1 2 3 4 5 6 7 8 9 10 |
| 49. Use breathing during labour contractions | 1 2 3 4 5 6 7 8 9 10 |
| 50. Keep myself in control | 1 2 3 4 5 6 7 8 9 10 |

| | |
|---|---|
| 51. Think about relaxing | 1 2 3 4 5 6 7 8 9 10 |
| 52. Concentrate on an object in the room to distract myself | 1 2 3 4 5 6 7 8 9 10 |
| 53. Keep myself calm | 1 2 3 4 5 6 7 8 9 10 |
| 54. Concentrate on thinking about the baby | 1 2 3 4 5 6 7 8 9 10 |
| 55. Stay on top of each contraction | 1 2 3 4 5 6 7 8 9 10 |
| 56. Think positively | 1 2 3 4 5 6 7 8 9 10 |
| 57. Not think about the pain | 1 2 3 4 5 6 7 8 9 10 |
| 58. Tell myself that I can do it | 1 2 3 4 5 6 7 8 9 10 |
| 59. Think about others in my family | 1 2 3 4 5 6 7 8 9 10 |
| 60. Concentrate on getting through one contraction at a time | 1 2 3 4 5 6 7 8 9 10 |
| 61. Focus on the person helping me in labour | 1 2 3 4 5 6 7 8 9 10 |
| 62. Listen to encouragement from the person helping me | 1 2 3 4 5 6 7 8 9 10 |

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